

**INTERIM CORRECTIVE MEASURES IMPLEMENTATION REPORT
ASBESTOS SURFACE IMPOUNDMENT
SOLID WASTE MANAGEMENT UNIT
OCCIDENTAL CHEMICAL CORPORATION
WICHITA, KANSAS**

Prepared for



OCCIDENTAL CHEMICAL CORPORATION

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25 July 2008

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1. INTRODUCTION

The Occidental Chemical Corporation (OCC) facility in Wichita, Kansas (RCRA ID No. KSD007482029) completed an Interim Corrective Measure (ICM) in November 2006 to mitigate a potential threat to human health and the environment related to the discovery of near-surface, asbestos-containing material believed to be associated with a historical asbestos surface impoundment (ASI) solid waste management unit (SWMU) at the facility. This ICM Implementation Report provides information regarding discovery of the area, assessment of the area, and construction of a concrete cap over the area where near-surface, asbestos-containing material was noted. This report also provides information regarding the operation and maintenance of the ICM.

2. PROJECT BACKGROUND

The OCC Wichita facility began operations in the early 1950s as an Inorganic Plant. The ASI operated from 1951 to 1977 in the southern portion of the inorganic production area. Figure 2-1 shows the approximate location of the ASI within the facility. Figure 2-2 shows the estimated size and approximate location of the impoundment relative to existing site features. The impoundment is located directly to the south of Cooling Tower #4, the cooling tower associated with the Membrane 1 Plant, Cell Renewal, and the Chlorine Sniff Plant in the inorganic production area of the facility. Figure 2-3 is a 1961 photograph of the area provided to OCC by U.S. Environmental Protection Agency (EPA) Region 7 personnel.

During the period in which the impoundment was operational, asbestos-containing process wastewater generated by the regeneration of diaphragm cells used in the manufacture of sodium hydroxide. Waste was transferred to the impoundment from the Waste Asbestos Handling area that is located within the Cell Repair building in the southern portion of the facility. In 1977, the plant began disposing of asbestos-containing waste in licensed off-site facilities and use of the ASI was discontinued. Construction of additional operation units in the area after 1977 resulted in the covering of the ASI with soil, rock and concrete pavement associated with operating units.

Because of the potential for the presence of asbestos associated with historical operations, the area extending from the south side of the former pond to the area adjacent to Cooling Tower #4 was designated as the ASI area. The exact size of the ASI and the amount of asbestos in the area are currently unknown due to the absence of complete assessment data and the absence of historical production rates and tracking for on-site asbestos disposal. The size and approximate location of the ASI was determined primarily from the 1961 aerial photograph in Figure 2-3.

During routine maintenance activities in June 2005, maintenance personnel using a skid loader east of Cooling Tower #4 discovered a grayish-white material that was suspected to contain asbestos. A small quantity of loose soil had been initially moved by the skid loader, which then led to the initial visual observation of potential asbestos-containing material. On sample (W16-05) was collected from this material somewhere east of the #4 Cooling Tower, although neither the approximate nor exact location is known. Two additional samples (W17-05 and W18-05) were subsequently

collected approximately one week later; one sample was collected near the storm drain adjacent to the cooling tower basin and one sample was collected near the southern boundary of the graveled area. Although the specific samples' respective locations are unknown due to the lack of detailed field documentation, Figure 2-2 shows the approximate locations of the two samples collected from in-place material. After the samples were collected, the area was covered with tarps and plywood until completion of the ICM.

The three samples were shipped to Quantem Laboratories in Wichita, Kansas, for asbestos analysis. The analytical reports for the samples are provided in Attachment A. Table 2-1 is a summary of the sample results. The samples were reported to contain chrysotile asbestos in concentrations ranging from 15% to 75%.

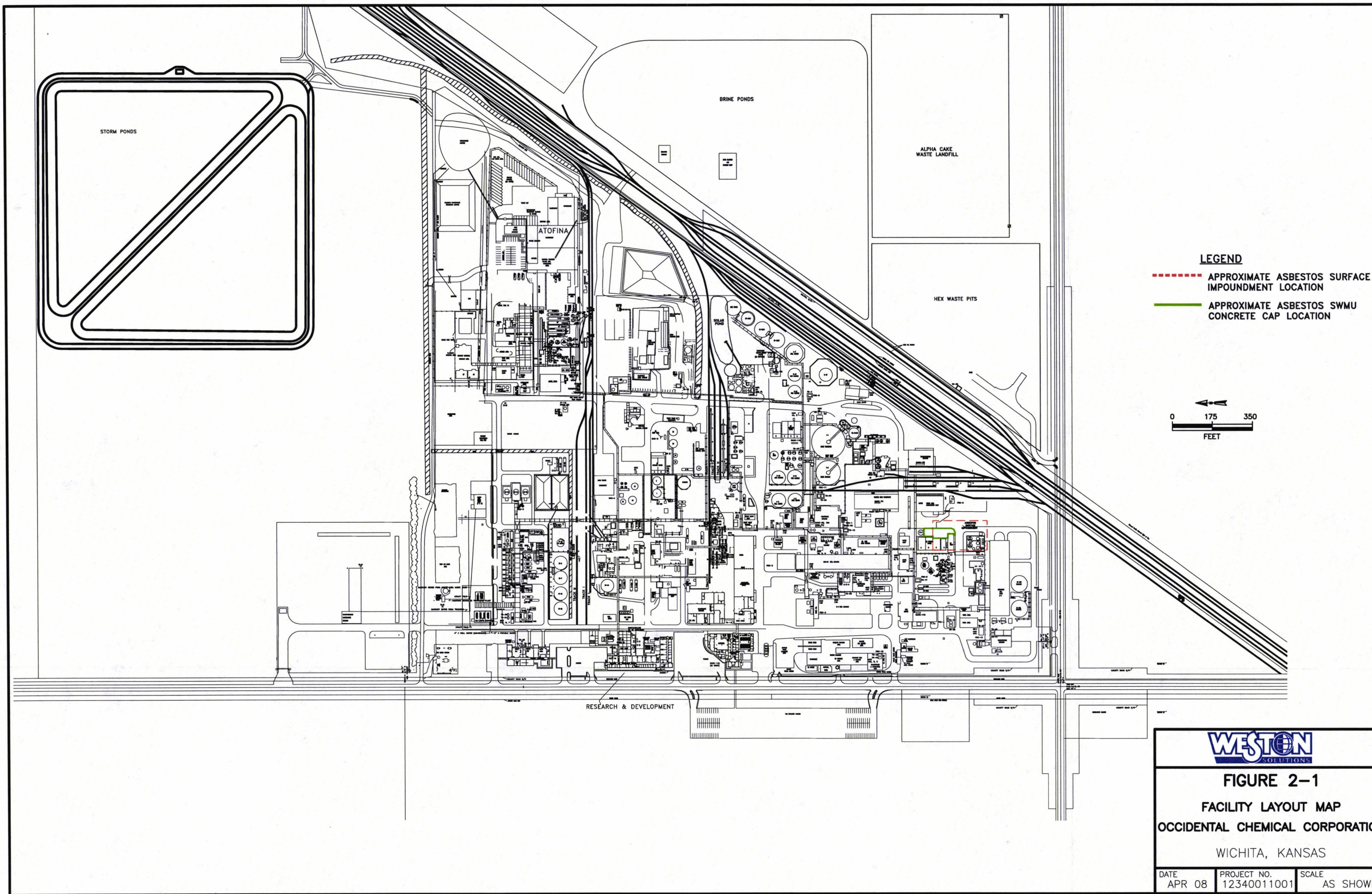
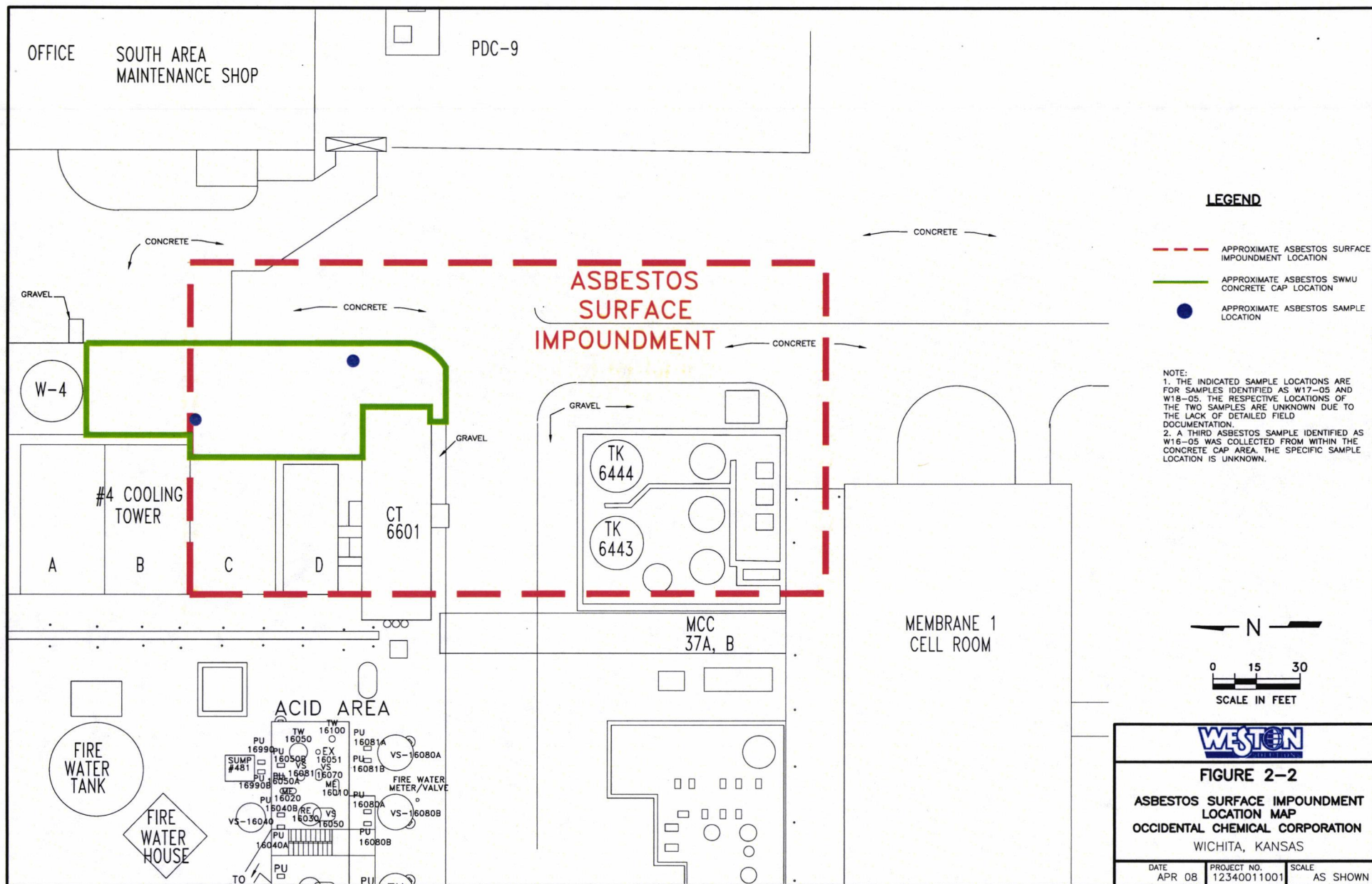
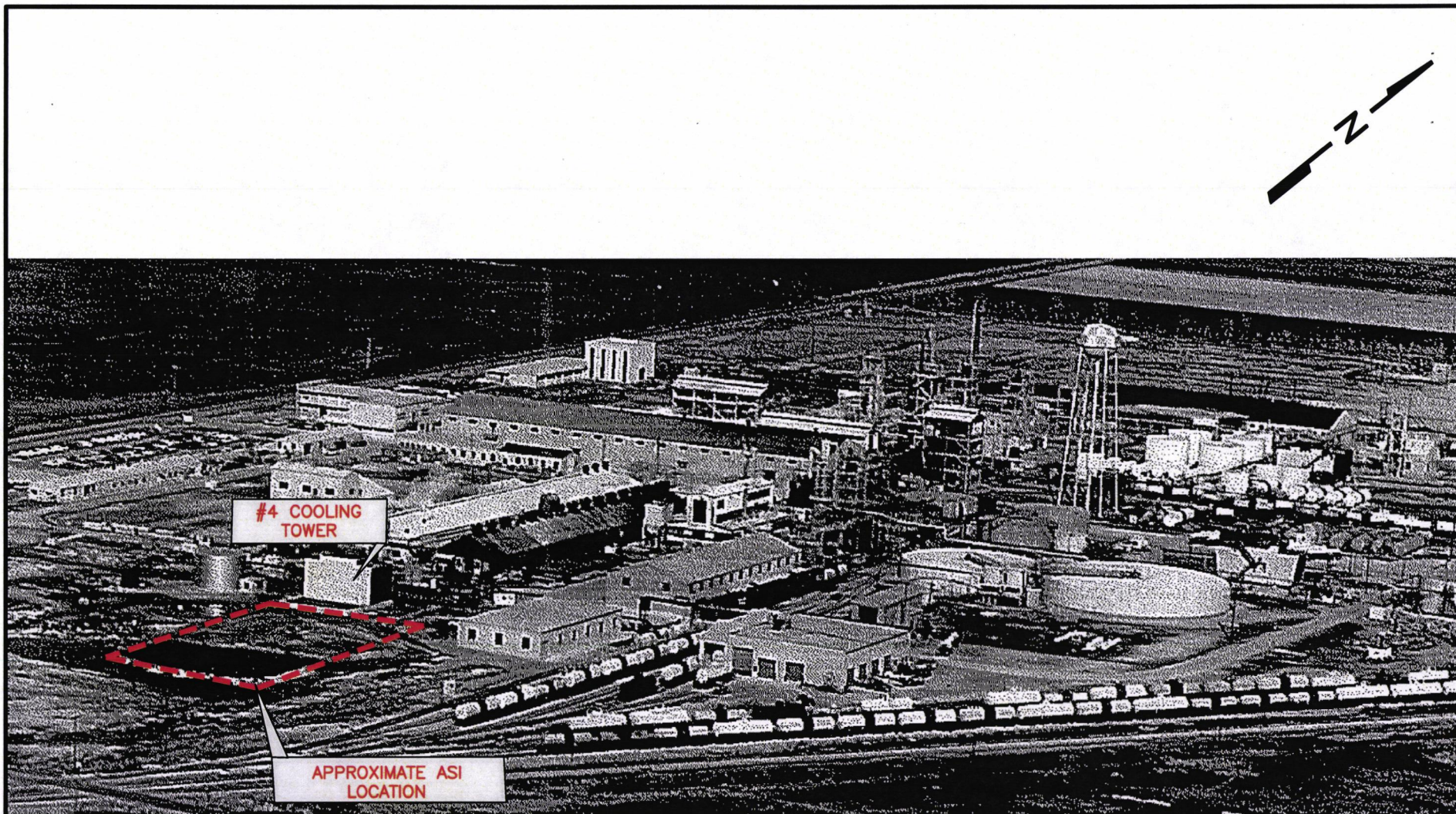


FIGURE 2-1
FACILITY LAYOUT MAP
OCCIDENTAL CHEMICAL CORPORATION
WICHITA, KANSAS

DATE	PROJECT NO.	SCALE
APR 08	12340011001	AS SHOWN





NOTE: ASI- ASBESTOS SURFACE IMPOUNDMENT

SOURCE: EPA REGION 7



FIGURE 2-3
1961 AERIAL PHOTOGRAPH

DATE JUNE 08	PROJECT NO. 12340011001	SCALE NOT TO SCALE
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Table 2-1
Summary of Asbestos Analytical Results
Occidental Chemical Corporation
Wichita, Kansas

Sample ID	Date	Sample Type	Color/Description	Type	Asbestos (%)
W16-05	6/30/2005	Loose Soil	Gray Insulation	Chrysotile	75
W17-05	7/7/2005	In-place Soil	Gray Insulation	Chrysotile	20
W18-05	7/7/2005	In-place Soil	Black Insulation	Chrysotile	15

3. INTERIM CORRECTIVE MEASURES

After confirmation that asbestos-containing materials were present near the surface in the area of the ASI, OCC selected a containment option for the ICM. In order to allow for equipment access in the area of the planned ICM, a concrete cap was selected as the most appropriate option. No disposal activities were associated with implementation of the ICM.

3.1 Cap Design

The design for the concrete cap included the following:

- 4,000 pounds per square inch (psi) concrete with $\frac{3}{4}$ -inch aggregate.
- Reinforcement with 50 pounds per cubic yard (lb/yd³) Novocon 1050 Steel Fibers.
- Site preparation, forming, and placement without grading of the existing soil/gravel surface.
- Variable thickness concrete cap with a 4-inch minimum thickness.

The concrete cap directs storm water runoff to the storm sewers in the area. Water associated with the cooling tower drains toward the containment around the cooling towers. Water that collects within the cooling tower containment is directed to the deep disposal system on-site.

3.2 Cap Construction

OCC hired Utility Contractors of Wichita, Kansas, to construct the concrete cap in November 2006. An as-built plan view of the cap and as-built design details are provided in Attachment B. Photographs of the cap are provided in Attachment C.

The full extent of the ASI SWMU is greater than the extent of the current cap. However, as shown on Figure 2-2, the approximate area of the ASI outside the cap is covered with concrete paving associated with plant operational areas.

4. MAINTENANCE AND CONTROL OF INTERIM CORRECTIVE MEASURES AREA

The Wichita facility has a preventive maintenance program that requires routine inspection of concrete areas to determine durability and sustainability. The approximate area of the ASI has been added to the preventative maintenance inspection program on an annual schedule. The detailed boundary of the ASI will be determined and the ASI will be further assessed during the On-Site RCRA Facility Investigation (RFI). Until completion of the RFI and implementation of the final corrective measures, an environmental review of major excavation or construction projects will be required by the facility as part of the current Management of Change (MOC) process and as a form of administrative control near the ASI in order to protect human health and prevent potential environmental impact.

ATTACHMENT A
ANALYTICAL DATA REPORTS



2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 125751
Account Number: A109
Date Received: 07/01/2005
Received By: Rachel Molieri
Date Analyzed: 07/05/2005
Analyzed By: Shelly Bromley
Methodology: EPA 600

Client: Precision Environmental Services
1405 South Mosley
Wichita, KS 67211

Project: Basic Chemicals
Project Location: N/A
Project Number: N/A

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)
001	W16-05	Homogeneous	Gray Insulation	Asbestos Present Chrysotile 75	NA

Shelly Bromley
Shelly Bromley, Analyst

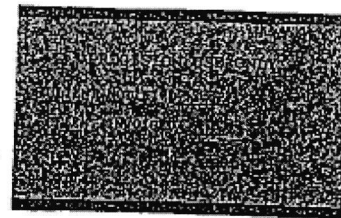
7/5/05
Date of Report

Quantem is a NVLAP accredited TEM and PLM laboratory (Lab Code: 101959). This report relates only to the specific items tested. NVLAP accreditation applies only to AHERA analysis [40CFR Ch. 1 (1-1-87 ed.) Part 763, Appendix A to Subparts E and F]. This report may not be used to claim product endorsement by NVLAP or any other agency of the US Government. This report may not be reproduced except in full, without the written approval of the laboratory.

**PRECISION
ENVIRONMENTAL
SERVICES**

1405 S MOSLEY • WICHITA, KS 67211
(316)265-0012 • FAX-265-8073

125751



CHAIN OF CUSTODY

DATE 6-30-05

PAGE 1 OF 1

CLIENT Basir Chemicals

PROJECT _____

ADDRESS _____

ADDRESS _____

PO # - will be faxed

BLDG # _____

PHONE: 316-529-7314

JOB # _____

FAX: 316-529-7333

TEST FOR:

ASBESTOS ☒

LEAD _____

OTHER _____

TYPE OF ANALYSIS:

PIM ☒

TEM _____

ATOMIC ABSORPTION _____

TCLP _____

OTHER _____

TURNAROUND: ☐ Rush ☐ Same Day ☒ 24 hour ☐ Standard

SAMPLE NUMBER	TYPE OF CONTAINER	DESCRIPTION OF MATERIAL	
W16-05	BAGGIE	GREY FIBROUS MATERIAL	

INSPECTOR/SAMPLER DAVID KUTTLER JR

RELINQUISHED BY _____ DATE _____

RECEIVED BY _____ DATE _____

Sam Conway 6-30-05
Sam Conway 6-30-05

Sam Conway 6-30-05
Sam Conway 7/1/05 9:45am



2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 125972

Account Number: A109

Date Received: 07/08/2005

Received By: Rachel Molieri

Date Analyzed: 07/08/2005

Analyzed By: Amy Gill

Methodology: EPA 600

Client:

Precision Environmental Services
1405 South Mosley
Wichita, KS 67211

Project:

Basic Chemicals

Project Location: N/A

Project Number: N/A

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)
001	W17-05	Homogeneous	Gray Insulation	Asbestos Present Chrysotile 20	NA
002	W18-05	Homogeneous	Black Insulation	Asbestos Present Chrysotile 15	NA

Amy Gill, Analyst

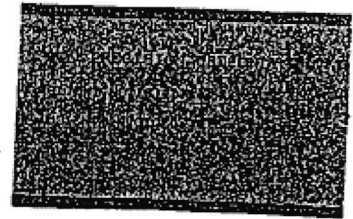
7/8/05

Date of Report

Quantem is a NVLAP accredited TEM and PLM laboratory (Lab Code: 101959). This report relates only to the specific items tested. NVLAP accreditation applies only to AHERA analysis [40CFR Ch. 1 (1-1-87 ed.) Part 763, Appendix A to Subparts E and F]. This report may not be used to claim product endorsement by NVLAP or any other agency of the US Government. This report may not be reproduced except in full, without the written approval of the laboratory.

1405 S MOSLEY • WICHITA, KS 67211
(316) 265-0012 • FAX-265-8073

125972



DATE 7-7-05

PAGE _____ OF _____

CLIENT BASEL CEMENT CO.

PROJECT

ADDRESS**ADDRESS**

PO # - BY FAX

BLDG #

PHONE: 316-529-7314

JOB #

FAX: 316-529-7333

ASBESTOS ☒ **TEST FOR:**
LEAD
OTHER

PIM ✓ TYPE OF ANALYSIS:
TEM
ATOMIC ABSORPTION
TCLP
OTHER

TURNAROUND: ☒ Rush ☐ Same Day ☒ 24 hour ☐ Standard

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INSPECTOR/SAMPLER DAVID KUTTLER

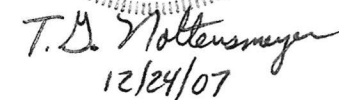
RELINQUISHED BY DATE


RECEIVED BY DATE

RELINQUISHED BY DATE
Sam Perry 7/7/05
Don Chung 7/7/05

RECEIVED BY R. O. Jones DATE 7/7/05
R. O. Jones 7/8/05 8:45am

ATTACHMENT B
DESIGN DRAWINGS



 OCCIDENTAL CHEMICAL CORPORATION WICHITA, KANSAS			
COOLING TOWERS CT-17004 (CT-4) PAVING - EAST SIDE SECTIONS & DETAILS			
JOB NO. A231 DATE 12/20/07 SCALE 2"=1'-0"	DRAWN SIN CHECKED LAYOUT SHEET	ENG. SEC - S. Noltensmeyer PROJ. Swain Boyce DWG NO. 3-1-2-15640	REV 1

ATTACHMENT C
PHOTOGRAPHIC DOCUMENTATION

Occidental Chemical Corporation, Wichita, Kansas

PHOTOGRAPH NO. 1



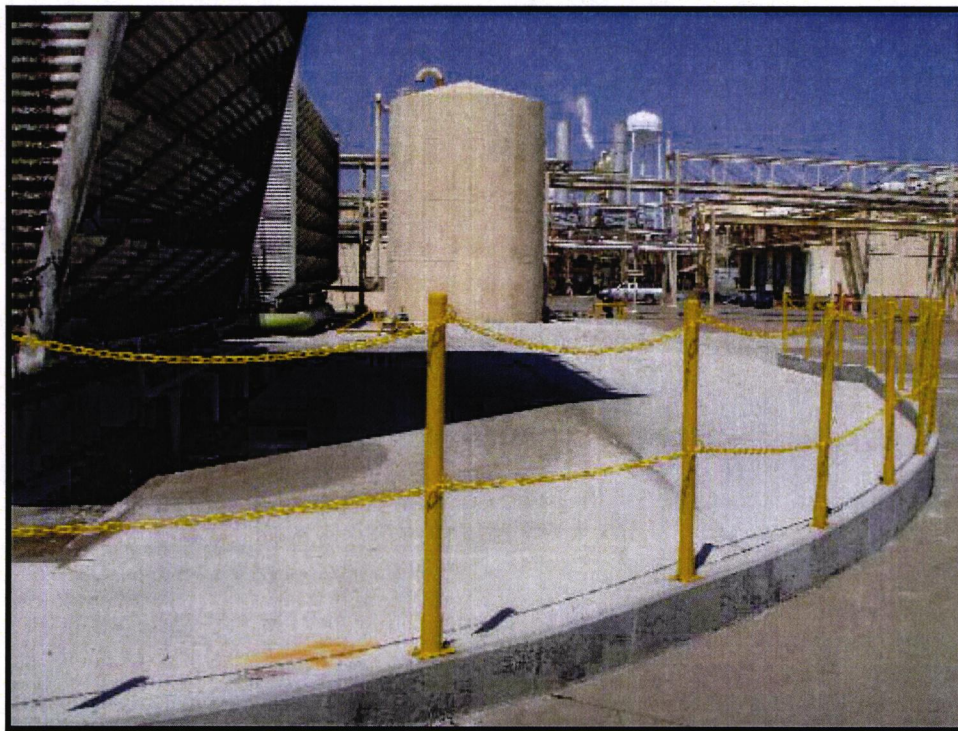
Date: 04/14/08

Direction: NE

Description:

Concrete cap located adjacent to the east of cooling tower.

PHOTOGRAPH NO. 2



Date: 04/14/08

Direction: N

Description:

View of the concrete cap from the south.

Occidental Chemical Corporation, Wichita, Kansas

PHOTOGRAPH NO. 3



Date: 04/14/08

Direction: S

Description:

View of the concrete cap from the north.

PHOTOGRAPH NO. 4



Date: 04/14/08

Direction: SW

Description:

View of the concrete cap from the northeast.